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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/628,503	07/28/2000	Myoung Jun Song	K-191	3785

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CHANTILLY, VA 20153

EXAMINER

NGUYEN, JIMMY H

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 08/22/2003

19

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/628,503

Applicant(s)

SONG, MYOUNG JUN

Examiner

Jimmy H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 July 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4,5,8-19,22-24,26-29,32-38,40,41 and 43-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4,14-19,27,28,33,34,41 and 47 is/are allowed.
- 6) ☒ Claim(s) 1,2,5,8-13,22-24,26,29,32,35-38,40,43-46 and 48-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Request for Continued Examination*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submissions filed on 05/21/2003 and 08/11/2003 have been entered. Claims 1, 2, 4, 5, 8-19, 22-24, 26-29, 32-38, 40, 41 and 43-52 are currently pending in the application. An action on the RCE follows:

### *Drawings*

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the feature, "a first part of the divided display type information is **embedded into a vertical sync signal**" of claims 5 and 8, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

It is noted Applicant that in the amendment filed on 11/27/2002, page 19, paragraph 4, Applicant had amended the claims to remove the feature, "the divide display type information embedded in the vertical sync signal", in order to overcome the drawing objection under 37 CFR 1.83(a), and Applicant has currently amended claims 5 and 8 to add this feature into these claims.

***Claim Objections***

3. Claim 22 is objected to because of the following informalities: line 1, "device" should be changed to -- apparatus --, so as to be consistent with independent claim 1. Appropriate correction is required.
4. Claim 23 is objected to because of the following informalities: line 1, "device" should be changed to -- apparatus --, so as to be consistent with independent claim 1. Appropriate correction is required.
5. Claim 24 is objected to because of the following informalities: line 1, "device" should be changed to -- apparatus --, so as to be consistent with independent claim 1. Appropriate correction is required.
6. Claim 32 is objected to because of the following informalities: line 1, "apparatus" should be changed to -- video interface --, so as to be consistent with independent claim 2. Appropriate correction is required.
7. Claim 35 is objected to because of the following informalities: line 1, "apparatus" should be changed to -- video interface --, so as to be consistent with independent claim 5. Appropriate correction is required.
8. Claim 36 is objected to because of the following informalities: line 1, "apparatus" should be changed to -- video interface --, so as to be consistent with independent claim 5. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

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pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 1, 2, 12, 13, 22-24, 26, 29, 32, 40, 43-46 and 48-52 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding to claims above, the disclosure, when filed, does not contain sufficient information regarding to the claimed feature, “a recognition code that **does not correspond to a memory address**” of independent claims 1, 2, 12 and 26. The disclosure, specifically fig. 8 and page 20, lines 13-19, discloses the recognition code comprising two bits and representing information on the display type data. However, the feature, “memory address” could not be found in the original disclosure. In other words, the disclosure, when filed, does not contain sufficient information regarding to the above underlined feature.

11. Claims 5, 8-11 and 35-38 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding to claims above, the disclosure, when filed, does not contain sufficient information regarding to the claimed feature, “a first part of the divided display type information is embedded into a vertical sync signal”, of independent claims 5 and 8. The disclosure, specifically fig. 6 and the corresponding description on pages 17-19, discloses the divided display type information embedded into horizontal sync signal, R video signal, G video signal and/or B video signal, and the vertical sync signal including the clock pulse for recognizing the

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display type information. Further, the original claim 5 recites the display type information embedded into the vertical sync signal. However, the disclosure, when filed, does not contain sufficient information how the main body embeds both the display type information and the clock pulse into the vertical sync signal, and how the monitor separates the clock pulse and the display type information. Furthermore, one skilled in the art would recognize the clock pulse used for recognizing or recovering the display type information (see claim 16 or 29), the clock pulse is therefore provided separately from the display type information. Accordingly, if the display type information is embedded in the vertical sync signal, then what signal the clock pulse is embedded in.

It is noted Applicant that in the amendment filed on 11/27/2002, page 21, lines 1-3, Applicant had amended the claims to remove the feature, "the divide display type information is embedded in the vertical sync signal", in order to overcome the rejection under 35 USC 112, first paragraph, and Applicant has currently amended claims 5 and 8 to add this feature into these claims.

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 49-52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 49-52 recite the limitation "the plurality of data types" in line 1. There is insufficient antecedent basis for this limitation in the claims.

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14. It is noted Applicant that due to the rejections under 35 USC 112, first and second paragraphs above, the following art rejections are based as best understood by examiner.

***Claim Rejections - 35 USC § 102***

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

16. Claims 1, 2, 12, 22-24, 26 and 49-52 are rejected under 35 U.S.C. 102(e) as being anticipated by Wu (USPN: 5,986,636).

As per claims 1, 2, 12, 23, 24 and 26, the claimed invention reads on Wu as follows: Wu discloses an apparatus and an associate method for interfacing video information in a computer system, the apparatus comprising a main body or a computer (a computer 1, fig. 5) for outputting a video signal through video signal line (R, G and B color signals), a horizontal sync signal (Hs), a vertical sync signal (Vs) (col. 1, line 66 through col. 2, line 2, col. 4, lines 15-16), and, through a communication line or a display data channel (a bus 70) (see figs. 5 and 6B, col. 6, lines 11-

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28), for outputting display type information (an information packet, col. 7, line 12) including a plurality of display code (a plurality of addresses and a plurality of display parameters, such as front port times, back porch times, and etc., each address corresponding to each display parameters, see col. 7, lines 10-20), each display code including a recognition code (one of a plurality of addresses) for designating a kind of the corresponding display type information, such as front port times, back porch times, or etc. (see col. 7, lines 10-20) and data (front port times, back porch times, or etc., see col. 7, lines 10-20) corresponding to the recognition code; and a monitor (60) for detecting the display type of the corresponding video signal and for displaying the video signal (see fig. 5, col. 6, lines 10-38). The elements and the steps in the claims above are read in the reference.

Regarding to claims 22 and 49-52, as discussed above, as noting at col. 7, lines 10-20, Wu teaches the display information comprising a plurality of data types (a plurality of addresses and display parameters) such as a number of dots for a horizontal period, a number of back porches for the horizontal period, a number of horizontal lines for a vertical period and a number of horizontal lines of a back porch for the vertical period, and each of the plurality of data types having a unique recognition code associated therewith.

***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



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18. Claims 13, 29, 32, 40 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, and further in view of Arai et al (USPN: 5,457,473), hereinafter Arai.

As per claims above, as discussed above, Wu discloses the main body outputting a clock pulse (a clock signal, col. 7, line 11) for recognizing the display type information, through a communication line or a display data channel (a bus 70) (figs. 5 and 6B, col. 6, lines 11-28 and col. 7, lines 10-13). Further, since Wu's clock pulse is used to recognize the display type information, the display type information is synchronized with the clock pulse. In other words, Wu discloses every thing except that Wu does not disclose expressly the clock pulse included in the vertical sync signal and the display type information synchronized with the vertical sync signal.

However, Arai discloses a related apparatus comprising a computer (1a) for outputting the information, such as a control signal, to the monitor (1b) by adding the information to one of the video signal, the horizontal sync signal and a vertical sync signal, and a vertical sync signal synchronizing the transmitted information and comprising a clock pulse (the description at col. 6, lines 39-44, discloses the vertical sync signal including a pulse having a leading edge and synchronizing the transmitted information at the leading edge), for recognizing the transmitted information (further see figs. 4-5 and the description at col. 5, lines 39-67), thereby transmitting information from the computer to the monitor without the use of a communication line. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to utilize Arai's teaching above in the Wu reference, i.e., making Wu's the vertical sync signal including the clock pulse and synchronizing the display type information, because this would

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avoid the use of the additional communication interface, thereby reducing the cost of the apparatus.

***Allowable Subject Matter***

19. Claims 4, 14-19, 27, 28, 33, 34, 41 and 47 are allowed.

20. The following is a statement of reasons for the indication of allowable subject matter: the claimed invention is directed to an apparatus and a method for interfacing video information in a computer system. The independent claims 4 and 17 similarly identify the uniquely distinct features, “dividing the display type information and embedding the divided display type information into a horizontal sync signal and at least one of the R, G, and B signals, respectively”. The independent claim 14 identifies the uniquely distinct features, “dividing the display type information of a video signal into at least two parts, and transmitting divided display type information of the video signal in each of a horizontal sync signal and the video signal, respectively”. The independent claim 27 identifies the uniquely distinct features, “dividing the display type information of a video signal and embedding the divided display type information into at least one of a horizontal sync signal, an R video signal, a G video signal and a B video signal”. The closest arts, Wu, as discussed above, discloses the display type information of a video signal embedded in the communication line, and Arai, as discussed above, discloses the display type information embedded in the video signal R, G or B, a horizontal synchronizing signal Hs, or a vertical synchronizing signal Vs, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

***Response to Arguments***

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21. With respect to independent claims 1, 2, 12 and 26, Applicant's argument, page 16, last second paragraph, that the amended claims 1, 2, 12 and 26 recite the feature, "a recognition code does not correspond to a memory address", which is distinct from the Wu reference, has been considered, but it is not found persuasive because of the rejection under 35 USC 112, first paragraph above.

***Conclusion***

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (703) 306-5422. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at (703) 305-4938.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

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JHN  
August 20, 2003

A handwritten signature in black ink, appearing to read 'JH Nguyen', with a long horizontal line extending to the right.

Jimmy H. Nguyen  
Examiner  
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